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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/619,512

07/16/2003

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EXAMINER

BUEKER, RICHARD R

ART UNIT

PAPER NUMBER

1763

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,512	<b>Applicant(s)</b> KEUM ET AL.	
	<b>Examiner</b> Richard Bueker	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-12,16-19,21-26,32,33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-12,16-19,21-26,32,33 and 35-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1763

Claims 1, 2, 6-12, 16-19, 22-26 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (JP 61-156809) taken in view of Mashita (JP 60-043480) and Morioka (JP 61-132589).

Mori discloses (see Figs. 2(a) and 2(b), for example) discloses a heating crucible for forming a deposition film in a vacuum deposition chamber. The crucible includes a jetting nozzle 3a defined in an upper wall of the crucible and an inner member 4 which includes a baffle board. The inner member 4 includes a surface having an area facing the nozzle 3a. The inner member has one or more openings 5 that are formed in the surface having the area that faces the nozzle, and the edges of the openings are defined by the surface and an inner wall of the crucible. Regarding the limitation of "defined by notches", it is noted that if enough notches were removed from the board of Mori, then the board of Fig. 1b or 2b would result. Thus, Mori's board is in accordance with applicants' description of their opening at page 6, lines 16-19 of the specification. Also, the upper wall of the crucible is perpendicular to a transmission direction of vaporized coating material that passes through the openings. The claim 1 limitation of "which receives an organic compound" is a recitation of intended use of the claimed apparatus and the present apparatus claims are not limited to use with any one particular type of coating material. The apparatus of Mori has an inherent capability of being used with an organic compound of the type recited in applicants' recitation of intended use. The inner member of Mori is supported by "fixing portions" that are formed as ledges in the surface of the inner wall of the crucible.

Each of Mashita (see element 6 of Fig. 4) and Morioka (see Figs. 1-4) disclose analogous vaporizers, in which the inner member baffle board is supported by fixing portions in the form of protrusions that are suspended from an inner wall of the crucible. It would have been obvious to one skilled in the art to modify the apparatus of Mori by replacing the ledge fixing portions of Mori with suspended protrusion fixing portions of the type taught by Mashita and Morioka, because the protrusions of Mashita and Morioka are functionally equivalent and are equally effective for achieving Mori's desired goal of supporting a baffle board.

Also, Mashita and Morioka teach the use of a baffle of the type used by Mori wherein the baffle openings can be in the form of notches. If, for argument's sake, the claim limitation of "defined by notches" were interpreted as requiring the openings to actually be notches, it would have been obvious to one skilled in the art to modify the apparatus of Mori by providing it with a notched baffle of the type taught by Mashita or Morioka, because Mashita and Morioka teach that their notched baffles successfully prevent the spitting phenomenon in a vaporizing crucible, which is the purpose of Mori's baffle.

Also, it would have been obvious to use a cylindrical shaped crucible for the crucible of Mori as recited in claims 35-37, because Mashita and Morioka teach that a cylindrical shaped crucible can successfully be used to accomplish Mori's goal of vapor deposition.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (JP 61-156809) in view of Mashita (JP 60-043480) and Morioka (JP 61-132589) for the

Art Unit: 1763

reasons stated above in the rejection of claims 1, 2, 6-12, 16-19, 22-26 and 35-37, and taken in further view of Tiedje (5,944,903) (see Fig. 6). It would have been obvious to one skilled in the art to provide the vaporizing crucible of Mori with a temperature-sensing unit because Tiedje teaches that a vapor deposition process can desirably be more accurately controlled by measuring the crucible temperature.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori (JP 61-156809) in view of Mashita (JP 60-043480) and Morioka (JP 61-132589) for the reasons stated above in the rejection of claims 1, 2, 6-12, 16-19, 22-26 and 35-37, and taken in further view of Spahn (6,237,529). Spahn (see Figs.6 and 7, for example) teaches the step of using an evaporation crucible of the type disclosed by Mori, Mashita and Morioka in a process of depositing a layer of organic electroluminescent (organic EL) coating material on a substrate. It would have been obvious to one skilled in the art to use a conventional evaporation crucible of the type disclosed by Mori, Mashita and Morioka to form an organic EL coating because Spahn teaches that a crucible of the type disclosed by Mori, Mashita and Morioka can successfully be used for depositing organic EL coatings.

The rejections based on Shen and Spahn have been removed to simplify the issues for discussion by removing unnecessary overlapping grounds of rejection.

Applicants have argued that in Mori, the member 4 is supported by stepped portion 1b, which does not include fixing portions as in the claimed invention. It is noted that according to applicants' most recent amendment, the fixing portions are required to be "fixing portions suspended from an inner wall of the main body". Therefore, the

Art Unit: 1763

rejection based on Mori has been modified to include the teachings of Mashita and Morioka, who teach that a baffle board can be supported by fixing portions that are suspended from an inner wall of the main body of a crucible. It would have been obvious to one skilled in the art to modify the apparatus of Mori by replacing the ledge fixing portions of Mori with suspended protrusion fixing portions of the type taught by Mashita and Morioka, because the protrusions of Mashita and Morioka are functionally equivalent and are equally effective for achieving Mori's desired goal of supporting a baffle board.

Applicants have further argued that in Morioka, the shielding plates 2 are supported by protrusion portions 3 that are similar in form and function to the stepped portion disclosed by Mori. The examiner agrees that protrusions such as those described by Morioka (and also the protrusions described in Fig. 4 of Mashita) are similar in form and function to the stepped portions of Mori. In that respect, the teachings of Morioka and Mashita are clearly combinable with the teachings of Mori. It is noted, however, that the protrusions of Morioka and of Fig. 4 of Mashita are "fixing portions suspended from an inner wall of the main body", and therefore make obvious the "fixing portions" now recited in the claims as amended.

The dictionary definitions of "suspend" and "hang" are cited of interest and attached to this office action. "suspend" is defined as "to hang so as to be free on all sides except the point of support". Also, the definition of "hang" includes "to apply to a wall". It is clear from these definitions that the claim limitation of "fixing portions suspended from an inner wall" includes a fixing portion such as fixing portion 6 illustrated

Art Unit: 1763

in Fig. 4 of Mashita, in which the fixing portion is applied to an inner wall so as to hang free on all sides except for its point of support that is attached to the inner wall.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

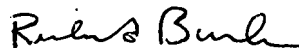
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Bueker whose telephone number is (571) 272-1431. The examiner can normally be reached on 9 AM - 5:30 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1763

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Richard Bueker  
Primary Examiner  
Art Unit 1763